

## REMARKS

In accordance with the forgoing, claim 1 has been canceled, claim 2 has been amended and new claim 3 has been added. No new matter has been added.

In the Office Action mailed May 18, 2005, the Examiner noted that claims 1-2 were pending, and rejected claims 1-2. In view of the forgoing, claims 2-3 remain pending for reconsideration which is requested. The Examiner's rejections are traversed below.

### REJECTION UNDER 35 U.S.C. §102:

Claim 2 was rejected under 35 U.S.C. § 102(b) as being anticipated by Cullen et al., U.S. Patent Number 5,832,722 (hereinafter "Cullen"). This rejection is respectfully traversed.

In a non-limiting example, the present invention teaches that when regenerating NOx occlusion capacity, the air/fuel ratio of the exhaust gas is brought to a value of 0.8 to 0.95 and while sulfur purging, the air/fuel ratio of the exhaust gas is brought to 0.95 to 1.0.

Cullen discloses " FNXXA (LAMBSE, EXT.sub.-- NTR) is a look-up table of the rate of SO<sub>x</sub> accumulation (grams of SO<sub>x</sub> /lb of fuel). This table is **negative when hot and rich** and **positive when lean** as indicated below where: LAMBSE is the desired A/F expressed as an equivalence ratio" (Cullen, column 4, lines 6-12). The table discloses rich values for air/fuel ratios less than or equal to 1.0 and lean values when the air/fuel ratio is greater than or equal to 1.1. Cullen further discloses "if the engine is being operated in the mode as determined by block 182, the A/F is ramped from lean to rich, as indicated at block 184, to begin purging the trap 32 of SO<sub>x</sub>" (Cullen, column 5, lines 8-11). In other words, **Cullen discloses that when purging, the air/fuel ration should be lowered** from lean, defined above as an air/fuel ratio greater than 1.1, to rich, which is defined above as an air/fuel ratio less than or equal to 1.0. Therefore, Cullen fails to teach or suggest the feature "executing a restore processing against a sulfur poisoning of said NOx occlusion reduction type catalyst, by performing a lax rich control for controlling an air/fuel ratio of the exhaust gas to a theoretical air/fuel ratio or to a value slightly lower than the theoretical air/fuel ratio, when said NOx occlusion reduction type catalyst is heated to a sulfur purge temperature or above; setting an excess air factor of the exhaust gas of 0.95 to 1.0; and performing regeneration of the NOx occlusion reduction type catalyst when the excess air factor of 0.8 to 0.95 is maintained at the catalyst inlet" as recited, for example, in amended claim 2. Support for the claim amendment can be found in paragraphs [0017], [0044] and [0077] of the application specification.

Therefore, the applicant respectfully requests reconsideration of Claim 2 under 35 U.S.C.

§ 102(b) because Cullen at least fails to teach or suggest the above-identified features.

#### NEW CLAIM

Claim 3 is directed to a control method for an exhaust gas purifying system, which includes:

performing a lax rich control when the NOx occlusion reduction type catalyst is heated to a sulfur purge temperature or above, to control an air/fuel ratio of exhaust gas to a value equal to or slightly lower than a theoretical air/fuel ratio, wherein the lax rich control brings the an excess air factor of the exhaust gas to 0.95 to 1.0; and

restoring the NOx occlusion reduction type catalyst from a sulfur poisoning, wherein a regeneration control is performed for restoring NOx occlusion capacity of the NOx occlusion reduction type catalyst to bring the excess air factor of the exhaust gas to 0.8 to 0.95 at an inlet of the NOx occlusion reduction type catalyst.

Therefore, it is submitted that claim 3 patentably distinguishes over the prior art.

#### CONCLUSION

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

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If any further fees, other than and except for the issue fee, are necessary with respect to this paper, the U.S.P.T.O. is requested to obtain the same from deposit account number 19-3935.

Respectfully submitted,

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